STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6911

Petition of EMDC, LLC, d/b/a East Haven Windfarm, for a certificate of public good, pursuant to 30 V.S.A. Section 231 and 248, authorizing it to construct and operate a 6 MW wind electric generation facility, and associated transmission and interconnection facilities, in East Haven, Vermont

PREFILED TESTIMONY OF MARK KANE

ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

December 15, 2004

Summary: Mr. Kane analyzes the potential aesthetic impacts on the scenic viewshed from the proposed windfarm on East Mountain under the Quechee Test. Mr. Kane also assesses the validity of the aesthetics analysis provided by the Petitioner in this proceeding.

Q. Would you please state your name.

A. Mark Kane.

Q. Where do you reside, Mr. Kane?

A. Fairfax, Vermont.

Q. What is your current employment?

A. I am a senior associate with the firm SE Group, based in Burlington, Vermont.

Q. Would you explain or tell us what the SE Group is and what it does?

A. The SE Group is a multi-disciplinary consulting firm, which specializes in land, environmental and mountain planning work. We have offices in Burlington, Vermont; Bellevue, Washington; Frisco, Colorado; and Park City, Utah. The SE Group in Burlington was formed as a result of the merger of Dunn Hamelin Kane (where I was a principal) with Sno.engineering, a company based in New Hampshire.

Q. How long have you been employed with your present company?

A. I have been employed with the present company for three years. Prior to SE Group, I was a principal with Dunn Hamelin Kane from 1998 to 2000 and an associate with Dunn Associates from 1996 to 1998. Dunn Hamelin Kane merged with SE Group in 2000.

Q. Would you please set forth your background educational and work experience in this area.

A. I graduated from the University of Vermont with a Bachelor's Degree in Environmental Science. My specialty at the time was land use planning and environmental analysis. In 1988, I began my career with Wagner, Heindel and Noyes, an environmental consulting firm located in Burlington. I spent eight years with them ending as a Senior Environmental Analyst and Land Use Analyst. The work consisted of studies of site feasibility, environmental and aesthetic analysis and land planning issues. I also was the senior Geographic Information Systems (GIS) project manager with the firm. In 1996, I was asked to join Dunn Associates as an associate, to participate in the expansion of their land planning practice. The work with Dunn Associates included some similar projects to Heindel and Noyes, but extended into more complex site design issues. While with Dunn Associates, I completed projects for the Husky Injection Molding Campus in Milton, Orvis Retail Office Space and Corporate Headquarters in Manchester, a master plan for the former Digital Equipment Corporation plant at Technology Park as well as numerous other studies and land use analyses. I was also the principal planner and project manager for projects related to the extension of sewer lines in Milton, St. Albans and Colchester, Vermont. In recent years I have performed numerous studies and provided testimony on aesthetics and land use for clients in Vermont, New Hampshire and Colorado. Recent projects include

assisting the Town of Telluride, Colorado in the condemnation of 700 acres for scenic open space and preparation of a study of the impact of power distribution lines on aesthetic, land use and environmental resources for the Vermont Department of Public Service.

Q. In performing your consulting services, do you become familiar with aesthetic issues and local planning processes and how they relate to a particular development?

A. Yes. Much of my professional work has centered on the analysis and evaluation of specific aesthetic and land use issues as they relate to development. This has included aesthetic analysis for tower structures, open space planning and most recently, a study for the Vermont Department of Public Service on utility line location policy.

Q. Have you ever provided testimony before the Public Service Board in a Section 248 case?

A. No. As discussed previously, I have provided testimony on aesthetics before numerous local boards, Regional Act 250 Commissions and before the Environmental Board. I have also previously prepared the analysis of utility line location issues that was prepared for Public Service Board Docket 5496.

Q. Have you been retained by the Vermont Department of Public Service in

connection with the application for a certificate of public good by EMDC, LLC.?

A. Yes I have.

Q. What services have you been asked to provide in connection with that representation?

A. We have been asked to review the work of the applicant's consultants regarding the potential aesthetic impact of the proposed windfarm and to provide substantive comment and analysis as to whether their conclusions are correct and whether or not additional measures are necessary.

Q. In connection with your testimony on these issues have you prepared Exhibits?

A. Yes. We have prepared a document entitled "VISUAL RESOURCE ASSESSMENT EAST HAVEN WIND FARM DEMONSTRATION PROJECT", dated December 2004. This document accompanies this testimony as Exhibit DPS-MK-1.

Q. Can you describe this exhibit?

A. Yes. This document is a summary of our work in evaluating the viewshed (extent of visibility) and potential issues surrounding development of the 4-turbine demonstration project on East Mountain in the Town of East Haven. The document lays out the basic visual context of the area surrounding the proposed towers, provides a computer-based projection of potential visibility, the results of a

photographic reconnaissance and an analysis of our conclusions as to whether or not the project would result in an adverse and undue aesthetics impact.

Q. Can you describe the basic scenic context of the area surrounding the project?

A. Yes. The proposed site is along the ridgeline of East Mountain in the Town of East Haven. The ridge is currently home to an abandoned radar installation originally created by the US Government in the 1950's and many existing structures (including a 75' tall radar building) and an access road are presently visible. This is a very rural part of the state with a very low residential population and very few public roadways. The area within about 5 miles of the proposed ridge generally consists of mixed woodlands on an undulating terrain with a few hamlets along the western edge of the town. Surrounding communities, particularly to the north, south and east are also very rural and rugged. Within these areas, however, are conservation lands obtained during the Champion Lands process that are used by visitors for passive recreational activities. The location of these general features is contained in the document as Figure 2.

In addition, we have prepared a 3D computer model of an area encompassing 10 miles from the center of the proposed project. The purpose of this 3D computer model is to allow us to go to specific points on the ground and determine the character and characteristics of potential views. It also provides the input to our kinetic analysis of the turbines; their character when they are in motion. Figure 3 is a shaded relief plan of the study area, indicating the general topographic conditions

of the viewshed.

Q. Can you describe the viewshed of the project?

A. Yes. The Projected Viewshed Plan (Figure 3) within the document we've prepared shows the landform with a superimposed tone that indicates the areas of highest potential visibility. This visibility is based first and foremost on the natural topographic conditions using GIS data sets. A second factor that is considered is the presence of natural vegetation. The upper elevations tend to be more heavily wooded (mixed hardwoods and softwoods) than low lands (where agricultural uses continue and are more common). We've completed this analysis out to a distance of ten miles from the proposed site.

Q. How do these results compare to the work completed by T.J. Boyle and Associates on behalf of the applicant?

A. Our analysis was completed with the same set of tools and methods as described by T.J. Boyle in its visual analysis. These tools and techniques are very appropriate and represent accepted practices. In sum and substance, we agree with T.J. Boyle as to the extent of the viewshed and their characterization of the most critical viewpoints and the nature of the scenic qualities of the area.

We agree that the location for the project is a very remote part of the state where direct views of the proposed demonstration project are limited to a few specific

areas. The T.J. Boyle report correctly notes the large percentage of public lands surrounding the project site, but does not make an attempt to characterize or differentiate potential visibility and impacts from these areas except for a location at Maidstone Lake State Park.

Site visits by SE Group on January 29, February 1, October 11, and December 9, 2004 included stops at locations previously visited by T.J. Boyle and Associates as well as a drive along roadways where examination of the topographic data for the area would indicate some potential for concern. Weather conditions were not favorable during several of these visits for good photography however, but images were taken that appear similar in character to those taken by T.J. Boyle and Associates. We have identified four critical viewpoints (Figure 4) which were analyzed in more detail. Visual simulations using the 3D modeling tools were also prepared (Figures 5-8) for some of these viewpoints.

Q. Where do you disagree with the T.J. Boyle Report?

A. While we basically agree on the nature of the viewshed, the characterization of the direction and magnitude of potential views, and the issue of lighting, we believe that the project will result in an adverse impact with respect to aesthetics because of the general incompatibility between an industrial windfarm and the relatively isolated natural environment of East Haven. However, while we conclude that the project will result in an adverse impact on aesthetics, we do not believe that the

impact will be undue.

Q. Please explain.

A. Certainly. In Vermont, the aesthetic impact of a proposed project is examined under the test established by the Quechee decision. For a project to fail the Quechee test, it must be found to have an adverse impact on aesthetics, and that adverse impact must also be found to be undue. A project has an adverse impact on aesthetics when it is found to be generally incompatible with its surroundings. As mentioned above, we believe that this is the case with this project. To determine whether that impact is also undue requires that the project be evaluated against three tenets established by the Quechee decision.

Q. Did you perform this analysis?

A. Yes.

Q. Would you explain your conclusions?

A. Yes. The Quechee method provides an excellent way of considering a single element within the scenic context. Three questions must be asked and if any are answered in the affirmative then the adverse impact from the project is also considered undue. The questions are as follows:

1. Does the project offend the sensibilities of the average person? Is it offensive

or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

We believe the answer to this question is "no". Although we believe that a project such as this can be shocking when viewed up close, we believe that the average person will not be viewing the project from a vantage point closer than 6 miles from the site. At this distance, the size and scale of the project is greatly reduced. This dramatically reduces the potential of the project to diminish the region's inherent scenic qualities.

2. *Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?*

We believe the answer to this question is also "no". Our review of the regional and local planning documents did not reveal any <u>specific</u> language associated with a wind farm project or any specific standard that the proposed project would violate. There are general comments and language attesting to the natural beauty of the area and its cultural significance.

3. *Has the Applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings?*

Again, no. First, the applicant has chosen a site with a developed past as the potential location of the wind farm. The ridgeline structures associated with the historic air station have long been a part of the landscape of the region and were easily noted from various vantage points. While the proposed use is different in many ways, the use of a site that has been previously impacted seems to be a reasonable step in attempting to reduce visual impacts. Much like co-location for cellular towers is encouraged; an attempt to find a viewshed where a prior ridgeline development existed is noted in this instance. I suspect that such locations within the State are very few and far between. Additionally, the petitioner appears to be negotiating with the FAA to reduce the required safety lighting if possible and, in any event, the lights that will be installed are designed to minimize the downward effect of the flashes. Lastly, the petitioner has chosen to color the towers in a manner that should minimize their visibility against the background sky.

Q. Could you please briefly summarize your testimony?

A. Yes. It is my belief that the project, when reviewed under the Quechee analysis, will have an adverse impact on the aesthetic quality of the surrounding scenic viewshed. However, I do not believe that the impact will be undue and the project therefore passes muster under Quechee. My analysis and conclusions are set forth in detail in the attached report to which I respectfully refer the Board. Lastly, I

would like to mention that in my report I also recommend that the Board reject the testimony of Mr. Owens where he suggests that the Quechee analysis should not apply to commercial windfarm developments on Vermont's ridgelines.

Q. Does this conclude your testimony?

A. Yes it does.